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NOTES ON CAPE LOOKOUT
(NORTH CAROLINA) FISHES—1925

Mustelus canis. Smooth Dogfish. A specimen which I caught on February 22, exactly 48 inches long is much the largest I have ever seen anywhere though larger ones have been recorded.

Tetronarce occidentalis. Electric Ray. A specimen taken February 21 appears to be the largest known individual of this species. It measured $60\frac{1}{2}$ inches long, with breadth of disc of 41 inches, weighing 125 pounds. I have presented it to the American Museum of Natural History, where a life size model is being prepared for exhibition.

Scomber scombrus. Common Mackerel. A single individual of about three-quarters pounds weight was taken February 12, and I am glad to have this authentic record of the species locally, where it is certainly much less common than sometimes supposed. *Auxis thazard* is called Northern Mackerel here by the natives.

Pollachius virens. Pollack. On February 13 I caught a small Pollack about 10 inches in total length, now in

the collection of the American Museum, which establishes the southern limit for this fish's range.

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COLOR VARIATIONS IN LARVAE OF *NECTURUS MACULOSUS**

CIRCUMSTANCES having recently afforded us an opportunity of observing hundreds of living larvae of *Necturus maculosus*, a note is perhaps in order that may throw some light upon the doubt expressed by Dr. B. G. Smith in his paper "The Nests and Larvae of *Necturus*," (Biol. Bull., XX, 1911, pp. 191-200), concerning "black" larvae of this species. During the summer of 1924, Dr. Cahn raised in his laboratory in Waukesha County, Wisconsin, 714 young *Necturus*, and in 1925, 976 larvae, a total of 1690 individuals. The striking thing about the larvae is the uniformity of coloration and pattern—a dark brown body, finely mottled with tiny spots of pale yellow about the sides of the body and tail, with two very conspicuous dorsal lateral stripes of yellow. These stripes pass around the dorsal base of the tail, never uniting in the median line, thus agreeing with Smith's description of the western as distinguished from the eastern (Pennsylvania) larvae, which we have never seen. While the body color varies a little in tone, there is a conspicuous variation in the color of the stripes from bright lemon yellow to a dull almost olive green. The important fact is that among the 714 larvae of 1924 there occurred eight unstriped individuals agreeing strikingly with the description by Garnier (Proc. Can. Inst., Ser. 3, Vol. 5, pp. 218-219), of a small *Necturus* to which he gave the name of *Menobranhus lateralis latastei*: "The coloration above was black, the abdomen sooty and the

*Contribution from the Zoölogical Laboratory of the University of Illinois, No. 264.

gular fold white". Our specimens were not black, but such a *very* dark brown as to make one hesitate as to whether to call them black or brown. Smith hints that Garnier may have had larvae of *Cryptobranchus alleghenensis*. It is of interest to note that Dr. Whitman (Smith, footnote p. 199), had seen three such larvae as Garnier describes, and pronounced them "unquestionably *Necturus*". In view of our larvae, we think it is very possible that Garnier had what we have: melanistic individuals of *Necturus maculosus*. That they are rare is indicated by the fact that only one unstriped larvae occurred in the 976 raised in 1925, although the eggs were collected from under the same boards as those of the previous year. However, in this latter group occurred equally interesting specimens in the form of two albino larvae. These specimens, preserved when they attained a length of 18 mm. are immaculately white on a pale yellow yolk sac. Up to the time of killing, they were entirely normal in their behavior and reactions.

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A SET OF ALBINO FROG EGGS*

WHEN one searches the literature dealing with amphibia for titles concerning albinism, one finds a surprising amount of material, yet most of the cases cited deal with individual cases, usually a single individual. Notwithstanding the considerable literature on the subject, albinistic tendencies in this group are unusual enough to warrant mention.

On March 26, 1925, I was hunting for the eggs of *Ambystoma* in a small temporary pool two miles south of Rantoul, Illinois. The pond was loaded with egg

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masses of a small anuran, some of which I gathered for identification. With my "mind's eye" focused on *Ambystoma* eggs, I passed two masses of white frog eggs encircling two slender blades of grass, with the mental note: "dead". However, something about the eggs worried me and I returned an hour later for closer inspection, and finally collected both masses. Laboratory examination showed them to be the eggs of *Hyla* (*Pseudacris*) *triseriata*, alive, and immaculately white instead of chocolate brown, the normal coloration of the eggs of the species. The eggs were in the late neural groove stage, one mass containing 127, the other 116 eggs. The larger mass was preserved intact; the smaller was split, one half being kept under typical laboratory conditions, the other being placed in absolute darkness, with a set of normal *H. triseriata* eggs in a similar stage of development in connection with each albino mass to act as controls. The eggs all hatched on March 30, the white eggs yielding pure white larvae, normal in every respect save for their lack of pigmentation. Following hatching, a few specimens were preserved each day for study. On the second day the white larvae showed under the binocular microscope the first faint traces of chromatophores, and from then on the growth of these pigment cells continued steadily but very slowly. This was true of those larvae kept in darkness as well, and there was no distinguishable difference between the two albino groups when the last were killed at the age of one month. Neither group, however, attain anything like the degree of pigmentation shown by the normal controls.

Inasmuch as the two masses were found side by side about four inches apart, it seems altogether likely that they are the product of the same female. That the parents were not albinos goes without saying, and an interesting question arises as to the cause of the absence of normal pigmentation. The preserved material is being utilized for embryological study with

particular reference to chromatophores, as it is peculiarly suited to such type of investigation.

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A SNAKE TRAGEDY

ON April 29, 1925, while on an auto trip out Gentilly Road in company with Dr. E. N. Transeau of Ohio State University, we witnessed, about 12 miles east of New Orleans, the following mute evidence of a snake tragedy to be added to the toll of the automobile. We had passed what appeared to be two snake carcasses lying parallel at the edge of the road. Upon stopping to investigate, it was found that they were in an advanced state of decomposition, but the teeth of the smaller, a water snake, (*Natrix rigida*), were imbedded firmly in the neck of the larger, a king snake, (*Lampropeltis getulus holbrooki*). Closer inspection showed about three inches of the tail of another water snake of the same species protruding from the mouth of the king snake. It was during the height of the breeding season, and the evidence seems to indicate that the water snake will defend his mate. The trio was crushed by automobiles during the struggle, and even "death did not them part."

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A NOTE ON TERTIARY ALLIGATORS

THIS summer Messrs. Hugo and Erich Schlaikjer, students in Harvard University, made a successful journey hunting fossils near their home in Scenic, South Dakota.

They found two alligator skeletons, one unusually perfect and one somewhat distorted. The skull of the perfect specimen has now been removed from the matrix and the other developed sufficiently to determine its characters. They are both almost just the same size, viz. about 11 to 12 inches long. Found some distance apart and about the size of others found, this probably indicates that they are adult. The level from which they were taken was in the Titanotherium beds, 134 feet above the Pierre Shales and 58 feet below the Oreodon beds. By the great kindness of Dr. Matthew and Dr. Mook of the American Museum of Natural History, I have had the type of *Alligator thomsoni* Mook, here for comparison with our skulls and this made possible placing these skulls side by side with skulls of the recent American and Chinese species and of several forms of Caiman. For this unique pleasure I owe Dr. Matthew my hearty thanks. My conclusions, which I put in print with some hesitation, may be of some interest if not of much value.

Our specimens prove to belong to *Alligator prenasalis* (Loomis), Amer. Jour. Sci. Arts., [(4), 18, 1904, p. 427]. This conclusion is concurred in by Dr. Mook who has had photographs of the better of our skulls. In a letter he notes his belief that *A. thomsoni* and *A. prenasalis* are not very distinct but some characters do not show in photographs and in reality the two forms are widely different, as would be expected for *A. thomsoni* is from the Middle Miocene of Nebraska.

A. prenasalis is a very distinct species, the extremely flat interorbital and praeorbital regions setting it off sharply from the two existing types and from *A. thomsoni*.

A. thomsoni is, as Mook has pointed out (Nat. Hist., 25, 4, 1925, p. 407, map and fig.), in many respects quite intermediate between the two existing species, the general form of the skull being much like our alligator and the heavy praeorbital ridges surrounding the concavity being much as in the Chinese type.

The comparison suggests very strongly that *prenasalis* represents some collateral branch and was not in the direct ancestry of the two existing species, as I should say *A. thomsoni* surely was.

In many details the Chinese alligator is much more Caiman—like than any of the other three species and may approximate more closely to those types, as yet undiscovered, which were the direct ancestors of the Caimans.

THOMAS BARBOUR

AMBYSTOMA PAROTICUM IN OREGON

At the time of publication of my synopsis of the Amphibia of California, no specimens of *Ambystoma paroticum* were available or on record from Oregon, although the species is rather common in British Columbia and Washington and has been found at two localities in California. Mr. Morton E. Peck of Salem, Oregon, has just forwarded a living specimen taken on Butte Creek, eight miles southeast of Scotts Mills, Marion County, Oregon, on October 18, 1925. The animal was found under a decayed log. It is an adult, measuring 217 mm. in total length. The upper surface is close to Van Dyke brown (of Ridgway's color standards), the parotroid gland near Verona brown, the lower large gland and the margin of the upper lip slightly paler than the parotoid; the under surface is "dusky", with both bluish and purplish tinges.

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"OPAH" AND "SKILLIGALEE" LANDED AT BOSTON FISH PIER

About July 27, 1925, the schooner Falmouth, with Capt. Jeffrey Thomas in charge, engaged in fishing for halibut, landed at the Boston Fish Pier a specimen which has been identified from photographs as *Lampris luna* Gmelin, sometimes called Opah, Moonfish or Jerusalem haddock. The fish was about three feet long and weighed about 110 pounds. The fish was captured on the southeastern part of Western Bank in deep water, west southwest from Sable Island.

Bigelow and Welsh in "Fishes of the Gulf of Maine", state "We include the Opah here because it is said to have been taken off Maine. We find no more definite record of it within the Gulf of Maine, but one was caught off Sable Island in 1856 and a second off La Have Bank many years ago." The flesh of the Opah is reported to be rich, firm, and delicate, unsurpassed as food.

On August 5, 1925, the Schooner Ethel Marian landed a "Skilligalee" about 5 feet in length, estimated to weigh 150 pounds. The schooner had been sword-fishing on Georges Bank. The fish is undoubtedly the spearfish *Tetraperus imperator* (Bloch and Schneider). Mr. F. F. Dimick informs me that "it is common in the summer time on the swordfish grounds, but the fishermen do not bother with them as there is no sale for them."

According to Mr. John T. Nichols, both spearfish and swordfish were reported to have been caught off Portland, Maine, during the past summer.

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